

REMARKS

Claims 1-24 were pending. All stand rejected. The applicant has added new claims 25-26. Therefore, claims 1-26 are presently pending. The applicant requests further consideration and re-examination in view of the amendments above and remarks set forth below.

The applicant amended claim 1 to remove the paragraph designations.

Rejections under 35 U.S.C. § 103:

Claims 1-24 are rejected as being unpatentable over U.S. Patent No. 6,078,933 issued to Szalwinski (hereinafter “Szalwinski”) in view of U.S. Patent No. 6,202,070 issued to Nguyen et al. (hereinafter “Nguyen”).

The applicant respectfully traverses the rejection. As recited in claim 1, the present invention is directed toward a method of retrieving data from a data storage media. See claim 1, preamble. As is explained in the applicant’s specification, data storage media, such as a magnetic tape or disk or optical drive, includes both data and a software program for disentangling the data. Applicant’s specification, at page 4, lines 16-30. The software program is retrieved from the media and loaded into a computer system that is to be used for interpreting the data. Applicant’s specification, at page 6, lines 12-26. The program provides at least two different operations or routines for accessing or presenting the data stored on the media. Applicant’s specification, at page 5, lines 14-26. Thus, claim 1 recites “loading a program from the data storage media into a computer system, the program including at least a first routine for responding to a first request type for access to the data storage media and a second routine for responding to a second request type for access to the data storage media.”

When a request for access to the data is received, a determination is made as to the type of the request. Applicant’s specification, page 7, lines 10-12. The possible request types include, for example, requests for access as though the data were an image backup or a set of logical volumes and requests for access as though the data were a file system. Applicant’s specification, page 7, lines 14 to page 8, line 4. Thus, claim 1 recites “receiving a request for access to data stored on the data storage media” and “determining whether the request is of the first type or the second type.”

A routine from the program that is appropriate to the request is called to service the request. Applicant’s specification, page 7, line 23 to page 8, line 8. The

requested data may then be returned to the requestor. Applicant's specification, page 8, lines 9-10. Thus, claim 1 recites "calling the first routine for accessing the data when the request is of the first type and calling the second routine for accessing the data when the request is of the second type" and "presenting the data."

Thus, the storage media in accordance with the present invention includes both the data to be accessed and a software program for servicing requests for access. The data can be retrieved using multiple different request types and interpreted in accordance with multiple different data formats. The invention overcomes disadvantages of prior storage techniques since the data can be completely or partially reconstructed, as needed. Further, the invention isolates the data storage format from the application used to generate the data so as to minimize problems caused by outdated data storage formats. Applicant's specification, page 2, lines 17-23.

Szalwinski discloses a parallel processing method and apparatus for archiving and retrieval of data. Szalwinski, title. In particular, scores of files from many steps in the process of manufacturing semiconductors are stored and archived for later retrieval. Szalwinski, col. 3, lines 63-65. To accomplish this, the system of Szalwinski employs a "master archiver" and a plurality of "child archivers." Szalwinski, abstract. The master archiver controls individual functions performed by the child archivers, while the child archivers perform actual archiving of data. Szalwinski, col. 4, lines 20-27. The child archivers generally function in parallel to simultaneously perform archiving functions. Szalwinski, col. 4, lines 33-35. Thus, when an archiving task that requires a large amount of processing resources is performed, a large number of child archivers can be activated. Szalwinski, col. 5, lines 61-64.

Nguyen discloses a computer manufacturing system with enhanced software distribution functions. Nguyen, title. The system manages and distributes software from release by a software engineering group to installation at a remote manufacturing site or testing facility. Nguyen, col. 4, lines 26-30. Nguyen seeks to overcome deficiencies in prior software distribution systems through several features. Nguyen, col. 4, lines 30-33. One such feature is the elimination of duplicate distribution of software by repeatedly eliminating duplicate files which may exist between materials provided by different software engineering groups. Nguyen, col. 4, lines 34-40. Another feature is the use of processes within and outside of a database management system to distribute released software files to a master isolated database

and to computer manufacturing facilities. Nguyen, col. 4, lines 41-50. Another feature is the use of database structures which control the distribution of software files to particular sites. Nguyen, col. 4, lines 51-58.

“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.” Manual of Patent Examining Procedure, Eighth Edition (hereinafter “MPEP”), § 2141, quoting *Graham v. John Deere & Co.* 383 U.S. 1 (1966). Thus, to rely upon a reference under 35 U.S.C. § 103, “the reference must either be in the field of the applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” MPEP, § 2141.01(a), quoting *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

As explained above, the present invention is directed to a method of retrieving data from a data storage media in which at least two routines are provided for responding to different request types for access to the data storage media. A principal advantage of the present invention is that it isolates the data storage format from the application used to generate the data so as to minimize problems caused by outdated data storage formats. In contrast, the Nguyen reference relates to a system of software distribution in computer manufacturing, including distributing software from release by software engineering groups to installation at a manufacturing site. Thus, Nguyen is directed to a problem that is entirely different from the problem addressed by the present invention. As such, Nguyen is not available to provide a basis for rejecting any of claims 1-24 because it is not in the field of the applicant’s endeavor and it is not reasonably pertinent to the particular problem with which the applicant was concerned.

Moreover, obviousness can only be established by combining or modifying the teachings of the prior art where there is some teaching, suggestion or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill. MPEP, § 2143.01. Szalwinski discloses parallel processing for archiving and retrieval of data in which a large number of child archivers can be employed to speed large archiving tasks, while Nguyen discloses a system of software distribution in computer manufacturing, including distributing software from release by software engineering groups to

installation at a manufacturing site. Because each is directed to a problem that this entirely different from the problem addressed by the other, there would be no teaching, suggestion or motivation to combine the references.

The examiner suggests that a person would have been motivated by a desire to access and retrieve data more quickly to modify Szalwinski with the software routines of Nguyen. However, the routines to which the examiner refers (at col. 7, lines 22-54) eliminate duplicate distribution of software and form a master isolated database. These software routines of Nguyen perform tasks that are not needed and are not contemplated by Szalwinski. Therefore, a person would not have been motivated to make the combination at least because such a combination would not achieve the time-conservation goal suggested by the examiner.

This is another reason why claims 1-24 are allowable over Szalwinski and Nguyen.

Further, even if combined, Szalwinski and Nguyen do not render claim 1 obvious because they do not suggest or disclose all of the features of claim 1. The examiner indicated that Szalwinski discloses loading a program from a data storage media into a computer system. However, the “loader” of Szalwinski to which the examiner refers (at col. 2, lines 46-60) does not load a software program, as in the applicant’s claim 1, but instead merely inserts content to be archived into a database. Further, the examiner indicated that Szalwinski discloses determining whether a request is of a first type or a second type. However, the portion of Szalwinski to which the examiner refers (at fig. 3, col. 6, lines 27-42) discusses that the master archiver monitors the child archivers to determine whether to execute a child archiver shut-down process, which is completely unrelated to the features of the applicant’s claim 1. Nguyen does not appear to suggest or disclose these features of claim 1 that are missing from Szalwinski. For at least this reason, claim 1 is allowable over Szalwinski and Nguyen. Claims 2-14 are allowable at least because they depend from an allowable base claim 1.

The examiner further indicated that Szalwinski does not disclose a program including at least a first routine for responding to a first request type for access to the data storage media and a second routine for responding to a second request type for access to the data storage media; calling the first routine for accessing the data when the request is of the first type and calling the second routine for accessing the data when the request is of the second type; and presenting the data. However, the

examiner indicated that Nguyen discloses software routines including “the first routine for accessing data and the second routine for responding the operation of the first routine such as transmitting and merging the data (col. 7, lines 22-54); calling the routines (col. 45, lines 38-45, lines 64-67) and presenting the result of requested data (col. 40, lines 3-5 and col. 47, lines 62-67).”

The applicant agrees with the examiner in that Szalwinski does not suggest or disclose a first routine for responding to a first request type for access to the data storage media and a second routine for responding to a second request type for access to the data storage media, as recited in claim 1. However, the applicant disagrees with the examiner’s assertion that Nguyen discloses this feature of claim 1. At column 7, lines 22-54, Nguyen discloses that a “first routine” is responsible for isolating software released by a particular engineering group into a separate isolated database, one for each group, and that a “second routine” is responsible for transferring and merging the information in the individual isolated databases into a single master isolated database. Once the software releases have been placed in the master database, they are replicated to the various computer manufacturing and test facilities. Nguyen, col. 35, lines 56-60. Thus, while Nguyen uses the terms “first routine” and “second routine” in describing its software distribution system, the routines of Nguyen are simply two routines for performing two functions that are completely different from that of the “first routine” and the “second routine” recited in claim 1. For example, the “first routine” and the “second routine” of claim 1 are for accessing the data stored by the data storage media, whereas, the “first routine” and the “second routine” of Nguyen are for eliminating duplicates of files stored in databases. Further, the “first routine” and the “second routine” of claim 1 are alternatives such that, for a particular request, one of the routines is selected for accessing the data based on the type of the request. Nguyen does not suggest or disclose such a feature. Rather, the routines of Nguyen are performed sequentially to process data to produce an intermediate result and then to process that result into a different result. Further, the “first routine” and the “second routine” of claim 1 are loaded from the same data storage media that also stores the data that is to be accessed. Nguyen does not suggest or disclose such a feature. Szalwinski also does not suggest or disclose the features of claim 1 that are missing from Nguyen.

In view of the above, the applicant submits that claim 1 is allowable over Szalwinski and Nguyen, taken singly or in combination. Claims 2-14 are allowable at least because they depend from an allowable claim 1.

Claim 15 recites “[a]n article of manufacture comprising a computer usable medium having data stored thereon and having computer readable program code stored thereon, the computer readable program code including a first routine for accessing the data in response to a request for access to the data as one or more raw data blocks and a second routine for accessing the data in response to a request for access to the data as a file structure.”

As explained above in reference to claim 1, Szalwinski and Nguyen do not suggest or disclose a “first routine” and a “second routine” that are stored on the same data storage media that also stores the data that is to be accessed. In addition, Szalwinski and Nguyen do not suggest or disclose a “first routine” and a “second routine” that are alternatives such that, for a particular request, one of the routines is selected for accessing the data based on the request.

For at least these reasons, claim 15 is allowable over Szalwinski and Nguyen, taken singly or in combination. Claims 16-21 are allowable at least because they depend from an allowable claim 15.

Claim 22 recites “[a]n article of manufacture comprising a computer usable medium having data stored thereon and having computer readable program code stored thereon, the computer readable program code including a first routine for accessing the data in response to a request from a first target system type and a second routine for accessing the data in response to a request from a second target system type.”

As explained above in reference to claims 1 and 15, Szalwinski and Nguyen do not suggest or disclose a “first routine” and a “second routine” that are stored on the same data storage media that also stores the data that is to be accessed. In addition, Szalwinski and Nguyen do not suggest or disclose a “first routine” and a “second routine” that are alternatives such that, for a particular request, one of the routines is selected for accessing the data based on the target system type.

For at least these reasons, claim 22 is allowable over Szalwinski and Nguyen, taken singly or in combination. Claims 23-24 are allowable at least because they depend from an allowable claim 22.